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ABSTRACT

From 1976 to 1983 major reforms were enacted in Chile in the vocational training systems, based on four principles: decentralization, integration, diversification, and participation. The vocational training system in Chile is a legally established, market-oriented system in which many private training agencies compete to sell their services to private firms and government-sponsored public training programs. Private firms decide the amount and kind of training they want to buy; government subsidizes firm-based training programs through tax rebates and finances public training programs for workers without access to training in private firms. Enacted in 1976, the Vocational Training and Employment Statute stresses market forces in the delivery of vocational training services. Five types of public training programs are offered under the training and employment statute: vocational training grants, adult workers retraining programs, training program for low-income female workers, youth training program, and apprenticeship program. Evaluation of the training system performance provides evidence that decentralization of demand decisions to the level of individual firms has brought training supply much nearer to local labor market demand; enhanced the capability of the system to respond flexibly to local needs. Efficiency in terms of unit cost reduction and local relevance have not yet been fully achieved. (YLB)

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Training

Vocational training in Chile: A decentralized and market oriented system

by Eduardo Martinez Espinoza

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This study is one of several prepared in the framework of research undertaken by the ILO's Training Policy Branch on the subject of national experiences in attempting to improve the efficiency, effectiveness and impact of public training systems. The research has focused in particular on the decentralization of training as a means of enhancing flexibility and responsiveness to local labour market conditions.

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I. Executive summary

The Chilean vocational training system is essentially different from the typical Latin American model where services are provided by an official, largely monopolistic, Vocational Training Institution (VTI), financed mainly by a payroll levy on firms. Instead, Chile has a legally established, market oriented system in which many private training agencies compete to sell their services to private firms and government-sponsored public training programmes. Private firms decide the amount and kind of training they want to buy; government subsidizes firm-based training programmes through tax rebates, and finances public training programmes for workers who do not have access to training in private firms. Given the fact that training expenditure is determined by firms themselves, tax rebates for private training programmes in Chile are not - as in other Latin America countries - simply a mechanism to withhold part of an enterprise's compulsory contribution to an official VTI.

In 1976 Chile enacted the Vocational Training and Employment Statute (Estatuto de Capacitación y Empleo) stressing market forces in the delivery of vocational training services. The rationale of this system is based on the following principles: (a) stimulating decentralized demand decisions as the leading force guiding the provision of training services, aiming to strike a better balance between demand and supply; (b) market competition among training agencies as a means of promoting efficiency and quality in the production of training services and (c) provision of free public vocational training programmes addressed to labour force entrants, unemployed adults and workers not covered by firm-based training programmes.

Although this system has boosted national training activities, more than tripling the number of trainees and financial resources allotted in the former public vocational training system - 280 thousand trainees and resources of US$ 57 million in 1992 - it has had only a limited distributional impact, since subsidized training is highly concentrated in bigger firms and for top level personnel. Indeed, there are signs of "switching effects" generating windfall gains at the expense of public resources for private firms that do not need incentives to train their workers. Furthermore, in some cases the quality of training services seems undermined, training costs have risen and there is uncertainty regarding the socially efficient use of resources when the market is highly subsidized. Finally, training opportunities in public programmes have been scarce until quite recently. Nevertheless, most of these shortcomings are probably the consequence of a lack of government policies and controls, and could be resolved without excessive financial strain.

II. Background: Labour market and human resource development - the institutional framework

A. The labour market

In the last six years, the labour market in Chile has experienced an impressive level of growth accompanied by an improvement in its employment quality indicators, all of which is consistent with successful economic performance, as illustrated in Table 1:

Table 1. Chile: Labour market profiles

	1986	1992
Participation rate (%)	30.9	33.7
Employed workers (thousands)	3,743.3	4,552.1
Unemployment rate (%)	11.0	4.9
Real wages index (April 89 = 100)		113.5
Labour productivity index (Dec.88 = 100)		117.3

Sources: National Statistics Institute (INE), Planning and Cooperation Ministry (MIDEPLAN)

Nevertheless, over one third of the labour force is precariously employed in: (a) the urban informal sector (22.3 percent of employed workers, with an average monthly income of US$ 190); (b) domestic services (6.3 percent of employed workers, with an average monthly income of US$ 86) and (c) small farming activities (8.4 percent of employed workers, with an average monthly income of US$ 125). Even in the formal sector, small firms - with low productivity and salaries - account for more than 25 percent of employment. In contrast, the average monthly wage of semi-skilled workers in the modern sector is over US$ 300.

Young and female workers constitute the more vulnerable segments in the labour force: the unemployment rate of the former is more than double the national average (12 percent in mid-1992 in the 15-24 age bracket. MIDEPLAN, 93), whereas female workers' income ranks 30 percent below male incomes, on average (MIDEPLAN, 91).

Human capital has grown consistently, measured in terms of labour force educational attainment, from an average of 6.2 years of schooling in 1960 to 9.2 years in 1992. Furthermore, in 1992 over 8 percent of active workers received continuing training in firms.

B. Human resources development - the institutional framework

Work-related education and pre-employment training in Chile are designed to satisfy expansion and replacement needs in a labour force of 4.7 million. Employment is expected to expand by 4-5 percent annually in the next five years, based on economic growth projections and employment-productivity elasticity trends, and currently accounts for a labour market absorption capacity of more than 200 thousand labour force entrants per year. Additionally, more than 260 thousand adult workers are engaged annually in retraining and upgrading courses - mostly in firm-based programmes - to cope with technological change, industrial restructuring and employment turnover.

On the supply side, the annual output of the formal education system (those who complete or drop out) amounts to over 242,000. The breakdown by educational level is given (for 1989) in Table 2.

Table 2. No's leaving the formal education system by educational level - 1989 (thousands)

University graduates and dropouts	51.2
High level (post-secondary) technicians (graduates and dropouts)	25.3
Middle level (secondary technical) technicians (graduates and dropouts)	23.8
Secondary general education (graduates)	25.8
Secondary general education (dropouts)	62.4
Primary education (graduates and dropouts)	53.8
Total outflow	242.3

Source: CIDE, 1990

Dropout rates (i.e., those who do not complete) are quite low throughout the system (for example at 11.6 and 2.7 percent respectively in general secondary and primary education respectively). These rates are broadly borne out by the enrolment and drop out data for 1990 presented in Table 3.

Table 3. Retention rates by education level - 1990

	Enrolment	Pass rate	Failure rate (repeaters)	Dropout rate
Primary	1,984,288	89.91	7.80	2.29
Secondary	720,230	80.27	12.35	7.37
General Secondary	464,522	80.37	12.38	7.26
Technical Secondary	255,708	80.11	12.31	7.58

Various public programmes for pre-employment vocational training and technical education are offered to school dropouts. These include adult technical education (3,000 adults enrolled in 1989); adult vocational training programmes (11,000 participants in 1989); and more recently a youth vocational training programme (Programa de Capacitación Laboral de Jóvenes) launched with financial assistance from the Inter-American Development Bank - IDB (25,000 participants in 1992). In addition, there is a large number of small scale training initiatives sponsored by private non-profit organizations.

The institutional framework for work-related education and training has experienced a major evolution - some say a revolution - in the last twenty years. The core of the transition to a new model is diversification and decentralization in a context of increasing private provision of education and training services. Post secondary education capacity was expanded to cope with the growing demand from secondary graduates, without overloading university enrolments; thus, new private institutions, separate from the universities, were created. Technical Education Centres (Centros de Formación Técnica - CFT) and Professional Institutes (Institutos Profesionales - IP) offer three to four year programmes in advanced technological education. In 1989, out of 110 thousand secondary school graduates, 42 thousand enrolled in 144 CFTs, 13 thousand in 161 IPs and 33 thousand in 52 universities.

At the same time, middle level technical education was decentralized, transferring the management of former public schools either to federations of industries or to local governments (Municipalidades)[1]. Under this scheme, the central authority, through the Ministry of Education, plays a normative and supervisory role focusing on basic curricula standards, and subsidizes school operations. Over ten years of experience in decentralized school manage-

ment show encouraging results in terms of matching school output and industrial needs, especially in industry-managed establishments. In 1990 there were 70 Upper Secondary Technical Schools (Liceos de Educación Técnico Profesional) managed by industrial federations, such as: Sociedad de Fomento Fabril (manufacturing sector employers); Asociación de Industriales Metalúrgicos (metallurgy sector employers); and Sociedad Nacional de Agricultura (agriculture sector employers). With small differences, the linkages between these technical schools and industries consist mainly of: (i) employers' participation in school planning and curricular design; (ii) study visits by teachers and students to industries; (iii) industry professionals and technicians lecturing in technical schools; (iv) industry co-operation in work experience programmes, and (v) industry contributions to schools, mainly in the form of equipment and materials. By contrast, the 150 municipal schools are only loosely connected to the employment sector and the quality of their education is hampered by budgetary constraints.

On the down side of the current strategy, it is more difficult in a decentralized system to: (a) coordinate nationwide educational policies and strategies; (b) benefit from economies of scale in administrative tasks and general purpose activities such as teacher training, teaching material production and education technology research and development, and (c) correct regional disparities.

In the vocational training area, direct public financing of the former official National Training Institute (Instituto Nacional de Capacitación - INACAP) was discontinued and INACAP was recently transferred to the private Trade and Production Federation (Confederación de la Producción y el Comercio). Though still one of the most important vocational training institutions in Chile, INACAP is nowadays a market-oriented agency selling its services in the field of subsidized firm-based training and publicly sponsored programmes (for example, the Youth Training Programme). Moreover, the bulk of INACAP's activities today caters for new customers: secondary school graduates ready to pay for advanced technological education as an alternative to university education. Overall, direct public provision of vocational training services - through INACAP - has been replaced by a demand-side subsidy to more than 12,000 firms performing training activities and by publicly financed training grants for workers not covered by firms' programmes. On the supply side, more than 1,700 private training agencies actively compete to capture private and public training demand.

None of the foregoing should give the impression that reforms have resulted in the demise of public training. There is still a substantial amount of public training in Chile, but this is now managed in a highly decentralized fashion.

III. Social changes and the emergence of a new vocational training institutional model

A. The transition to a market and outward oriented economy

The advent of the military government in 1973 marked the collapse of a thirty-year experience of inward-oriented economic policies based on price distorting subsidies and taxes, industrial protectionism and public enterprise promotion. The social side of this model was a welfare State promoting equity by means of income distribution policies and the public provision of social security, education and vocational training, public health services and housing. However, the financial burden of these social programmes and the inefficiency in public enterprises lead to severe fiscal deficits financed by tax increases and public debt, causing private investment decay and inflationary pressures.

In the mid seventies Chile initiated a profound structural adjustment process aimed at establishing a new market- and outward-oriented economic model, whose key elements were:

(i) employment reduction in the public sector and privatization of most public enterprises, as a means of reducing fiscal deficits;

(ii) labour market deregulation as a means of promoting private employment and facilitating labour force mobility in response to productivity incentives;

(iii) social security reform, based on a new personal savings scheme managed by specialized private institutions, as a substitute for the former - and deficitary - State managed social security common fund;

(iv) transition to an open economy by means of uniform tariff reduction and a favourable institutional environment for foreign investments, in conjunction with an export promotion strategy. The latter include tax, credit, commercial agreements and foreign exchange policies. (It is interesting to note that foreign trade has grown from less than 15 percent to more than 30 percent of GDP in the last twenty years);

(v) financial and production markets within an institutional framework favouring free competition and price system efficiency through increased tax neutrality and the suppression of price distorting factors such as subsidies, controls, quotas and commercial barriers; and

(vi) renegotiation of the external debt terms, in order to avoid excessive financial strain on the balance of payments.

B. Impact of economic restructuring on the labour market

The labour market was deeply affected during the first ten years of economic restructuring. Tensions developed in labour relations due to the weakening of labour union power and deregulation of salaries and employment conditions. Unemployment grew to over 25 percent in 1982, and the incidence of precarious occupations increased (i.e. occasional and part time jobs, and informal activities), not only as a natural consequence of the adjustment process but also because in the interim Chile suffered two periods of recession: the first (1975-78) was due to contraction of internal demand and the latter (1982-83) to an external trade and financial crisis. The government reacted to labour market turmoil arising from economic restructuring by means of two main - and financially expensive - compensatory policies: emergency employment programmes (Programa de Empleo Minimo - PEM - and Programa de Ocupación para Jefes de Hogar - POJH) and retraining programmes (for example, in the railways, coal and ports

sectors). The effectiveness of the latter was eroded by financial constraints, low trainability of workers (notably low educational levels, old age and/or lack of interest in training) and lack of alternative employment opportunities. At the same time favourable tax, foreign exchange and commercial policies were enacted, aimed at promoting savings and investment, technical modernization and on-the-job training.

During the first stage of economic transition, private sector development was sustained by improved market-guided resource allocation, and production cost reductions aimed at increasing the competitiveness of Chilean products in the global market. Elimination of excess labour and idle production capacity, complemented by decreasing real wages - due to high unemployment - and an overvalued exchange rate were the main factors in this latter process.

Technological modernization has been the leading force during the second stage of economic transition which has seen the introduction of new products, production processes, materials and equipment. This process has concentrated mainly in low value-added primary activities (for example, agriculture, fishery, timber and mining), a small number of manufactures (for example, cellulose, printing and food industries) and financial services (for example, banking, insurance, stock and securities exchange). All of these activities played a fundamental role in the Chilean export strategy during the eighties.

As for the near future, a greater technological dynamism is expected in the manufacturing sector, marked by the introduction of more complex equipment, processes and products, especially in small and medium size firms with export potential. Thus, new skills and competences will be required, generating new demands on the technical education and vocational training systems. Observed changes in more advanced technology-driven economies and labour markets show tendencies characterized by: (i) the relative reduction of employment opportunities for unskilled and semi-skilled blue collar workers in traditional resource-based heavy industries; (ii) the increased employment of middle level white collar personnel in professional, managerial, technical and administrative jobs; (iii) a general increase in the required academic, educational and training qualifications of all personnel; and (iv) the emergence of new interdisciplinary occupations based on more advanced knowledge and skills (Mickhail, 92). These trends indicate a plausible path for future labour market development in Chile.

C. The educational and vocational training reforms of 1976-83

From 1976 to 1983 major reforms were enacted in the formal education and the non formal vocational training systems, based on four main principles:

1. Decentralization

Decentralized management - either municipal or private - as a means of fostering flexibility, efficiency and labour market relevance in technical education and vocational training. In the case of technical education, this increased autonomy was to facilitate and promote student mobility and achieve compliance with basic national educational objectives and contents.

2. Integration

Work related education and training structures should be linked so as to constitute an effective, integrated and continuing education system contributing to labour force flexibility. The respective roles and frontiers of the formal technical education system and non-formal vocational training would be clearly defined, with the former emphasizing general scientific and technical knowledge and the latter concentrating on developing specific cognitive and practical competences. Moreover, curriculum design based on continuing education concepts would reduce educational redundancy.

3. Diversification

A work-related education and training institutional framework should offer multi-entrance/exit options. Multiple education and training paths would enhance equity and contribute to reducing dropout rates.

4. Participation

All parties interested in work-related education and training - such as government, workers' and employers' representatives - should participate in the formulation of sector policies. Thus, the creation of a National Council for Work Related Education and Training (Consejo Nacional de Educación para el Trabajo) is in the agenda.

In practical terms, these reforms meant that the Ministry of Education relinquished its former responsibility as the main direct provider of technical education services and that the management of its 159 technical secondary schools was transferred to local authorities or trade unions. The new role of the Ministry of Education became that of standard setting and providing financial incentives for training. As noted earlier, new private post-secondary technological and professional institutions, such as the Technical Education Centres and the Professional Institutes, were created to offer an alternative to the university system and to broaden access to tertiary level education.

The vocational training sector has undergone similar changes. The first adult training programmes were conducted in the fifties - on a small scale basis - by the State Technical University (Universidad Técnica del Estado). Later, rapid industrial development and massive infrastructure rehabilitation programmes, implemented after the 1960's earthquakes, generated a skilled worker shortage that could not be resolved simply by market forces. This created a more intensive public commitment to vocational training based on the argument that free market provision of training services would result in suboptimal human capital investment and unequitable access to training opportunities. The training market fails to capture "externalities" (i.e., social benefits not internalized by private human capital investors) and less qualified low income workers cannot afford to buy training services. These circumstances led to the creation of the Vocational Training Department in the Technical Cooperation Service (Servicio de Cooperación Técnica - SCT), the State owned national productivity centre, to provide free training services to blue collar workers.

The impressive growth of SCT training activities led to the foundation in 1966, of the National Training Institute (Instituto Nacional de Capacitación Profesional - INACAP), a tripartite semi-autonomous agency providing initial and upgrading training for semiskilled, skilled and technical workers, especially for the manufacturing, construction, agriculture and mining sectors. Technical assistance from the International Labour Office (ILO) and bilateral cooperation played a key role in the design and implementation of both the SCT Vocational Training Department and INACAP.

Finally, in 1976 the government enacted the Vocational Training and Employment Statute (Estatuto de Capacitación y Empleo). This provided the first legal framework defining the public role in vocational training and labour market intermediation. In line with other contemporary institutional reforms aiming to reduce State intervention in economic activities, this statute created a market oriented system where the State, instead of providing training services, subsidized training activities and controlled the overall performance of the system. In this system private training agencies would compete to sell their services to private firms and government-sponsored public training programs. Private firms would decide the amount and kind of training they wanted to buy, and the government would subsidize firm-based training programmes through tax rebates or finance public training programmes for workers not covered by private activities.

The rationale of the new system is based on the following principles (Martinez, 83):

(a) stimulating decentralized demand decisions as the leading force guiding the provision of training services, aiming to strike a better balance between human resources demand and supply;

(b) market competition among training agencies as a means of promoting efficiency and quality in the production of training services; and,

(c) provision of free public vocational training programmes addressed to labour force entrants, unemployed adults and workers not covered by firm-based training programmes.

To elaborate, competition among training agencies was intended to promote efficiency (unit costs reduction) and quality in the production of training services. Training relevance for local labour markets was to be achieved mainly by subsidizing training demand from firms. The idea was to substitute demand for supply as the driving force of the training market, although as discussed later in this paper, local relevance has not yet been completely fulfilled.

D. Structure and functions of the vocational training system

As noted above, the legal framework of the vocational training system was first established in 1976 (Decreto con Fuerza de Ley No. 1446) its most recent update being in 1989 (Decreto con Fuerza de Ley No.1). In this system the leading actors play the following roles:

(a) Government subsidizes freely-chosen firm-based training programmes by means of a tax rebate scheme, and finances public training programmes for workers not covered by firm-based training, i.e., unemployed and under-employed adults, young labour force entrants, and workers displaced by industrial restructuring. The necessary budgetary allocations are included in the annual fiscal budget.

(b) The National Training and Employment Service (Servicio Nacional de Capacitación y Empleo - SENCE), under the Ministry of Labour and Social Security, audits overall performance of the fiscal incentive system, plans and supervises public training programmes, and provides technical support to the 156 decentralized offices of the public employment services network (Oficinas Municipales de Colocación - OMC).

(c) Enterprises organize internal or external in-service training programmes for workers. Government grants a fiscal incentive to cover training costs up to the equivalent of one percent of the firm's payroll. This tax rebate implies financing by the State but the training imparted is decided upon by firms. Resources are allocated by the latter in accordance with their own interests, which may or may not coincide with national social or economic priorities. Tax deductions seek to compensate for the dissuasive effect of training externalities on private training investments (for example, social benefits not captured by the firm or benefits captured by trained workers leaving the firm) but, on the other hand, artificially lowering the private cost of training may result in an over-investment in human capital (Ducci, 91). In 1992, more than 12,000 firms benefitted from this incentive to train over 260 thousand workers.

(d) Over 1,700 private training agencies supply training services to firms and public sponsored programmes in a competitive market. These agencies include universities, professional institutes, technical education centres and vocational training firms. Training agencies have to be registered and approved by SENCE.

(e) Intermediary Technical Organizations (Organismos Técnicos Intermedios - OTIR) plan and organize (but do not perform) training activities for affiliated firms. They are organized on a sectorial or regional basis, and cater specially for small and medium size enterprises. Each OTIR pools its affiliates' resources and operates as buying agent for a group of firms not big enough to have their own training department. Voluntary contributions from affiliated firms are tax deductible as training expenditures up to the equivalent of one

percent of the firm's payroll. Currently, there are seven OTIR serving the metal mechanics sector (over 200 affiliates), construction sector (over 400 affiliates), general manufacturing sector (over 100 affiliates), commerce sector (over 80 affiliates), small industry and artisans (over 30 affiliates), and public transportation (over 1,200 affiliates); plus a small OTIR serving training needs in a southern regional area. These OTIR are non profit organizations approved by the Ministry of Justice and registered by SENCE.

E. Standards and procedures for tax rebates on training costs

Firms subject to income tax can deduct training expenditures from their annual tax accrual, up to the equivalent of one percent of the firm's payroll. For small firms the annual tax exemption ceiling is about US$ 300. Training activities benefiting from tax rebates must be previously approved by SENCE and be carried out in Chile. Training expenditures in excess of the tax deduction ceiling are treated as an ordinary cost to the firm. On the other hand, if deductible training expenditures exceed the firm's tax liability the Treasury pays the balance in cash to the firm.

Deductible training expenditures include:

(a) Direct costs of training activities performed by the firm or training services provided by an external training agency.

(b) Administrative costs of the firm's training department, up to the equivalent of 15 percent of direct training costs.

(c) Costs of training needs assessment, with a maximum of 10 percent of direct training costs.

(d) Costs of trainees' transport and per diem, up to 15 percent of direct training costs.

(e) Voluntary contributions to an OTIR.

(f) Apprentice salaries up to a maximum of 60 percent of the legal minimum monthly wages (approximately US$ 100).

Training agencies (and firms with their own training programmes) have to request SENCE approval for their training courses prior to execution, indicating where and when the activity is going to take place. SENCE then evaluates the consistency of the curriculum design (content, duration and methodology) with the course objectives, the teachers' profile, the target population and the course cost. The approved courses are then eligible as tax-deductible training activities. Presently, SENCE has a catalogue of more than six thousand approved courses. The approval process takes from two to three weeks, even though the law allows 30 days.

SENCE monitors these training activities on a selective basis. At the end of the fiscal year firms are required to report their total training expenditures to SENCE for final approval, prior to submitting their income tax statement.

IV. Public training programmes under the training and employment statute

A. Vocational training grants

Vocational training grants are awarded by SENCE to unemployed, underemployed, independent and small firms' adult workers. Candidates must register with the local Municipal Employment Service and are selected in accordance with social need criteria and the training course requirements. Candidates for public vocational training grants are selected according to the social situation of the individual, taking into account duration of unemployment; educational level; family dependants; family income, and socio-economic status as measured by a national socio-economic characterization system (CASEN). Training course entry level requirements are specified in terms of educational attainments, age, work experience and other factors pertinent to the course content. Grants include free training, board and transport allowance, health and life insurance and, frequently, a subsidized period of work experience.

Training courses are given by private training agencies, selected by a public bidding procedure. Courses last between 100 and 300 hours with average cost of US$ 1.5 per trainee-hour or US$ 4,000 per course. Over 2,000 fellowships were granted in 1992, at a total cost of US$ 580,000. Training courses cover semi-skilled occupations in labour intensive economic activities such as agriculture, livestock, forestry, small scale fishing and mining, construction, commerce, and personal services.

Vocational training grants are planned, organized and supervised by SENCE, in line with its budget (established in the annual national fiscal budget) and with training needs assessed by SENCE itself or local authorities (regional or municipal). Each Regional Division of SENCE gathers information on training needs and employment opportunities, using key informants, statistics and relevant studies from different sources (for example, investment projects). This information is used to plan the number of workers to be trained in public programmes, by broad occupational areas. Training agencies are then asked to propose specific training programmes according to these terms of reference. SENCE supervises the execution of the training courses on a sample basis. Systematic follow-up studies were suspended more than ten years ago, but SENCE expects to resume them in 1994.

B. Adult workers retraining programmes

Public retraining programmes address adult workers displaced by industrial restructuring and modernization (retraining for technological innovation within the firm is a private concern). Currently, these programmes are focused mainly on the retraining of redundant workers in the coal mining sector, estimated to be in excess of 4,000 workers out of a total sector workforce of ten thousand. Benefits include training grants, subsistence allowance, moving and installation allowance, tools and working implements (in the case of retrained workers entering self-employment), and salary incentives for firms employing retrained workers. Benefits extend for a period of nine months up to a total cost of US$ 1,200 per worker. It is worth mentioning that this programme is part of a more comprehensive public effort to build up incentives aiming to help industrial reconversion in the coal mining zone, by means of public works, reforestation and coal production subsidies for a limited period.

This retraining programme is financed and sponsored by SENCE, and executed by private training agencies. Workers participating are offered the option of attending training courses selected by SENCE on the basis of competitive bidding (called "collective training grants") or freely chosen among the whole universe of courses registered by SENCE (called "individual training grants"). Almost 700 training grants, for courses lasting between 100 and 300 hours, have been provided since the beginning of the programme in 1992, at a total cost of US$ 250,000 (other related benefits amount to US$ 400,000). Decentralized management and operations are crucial for the programme's success since the problem of coal mining sector reconversion is localized in the southern Seventh Region. Thus, SENCE's regional authorities and local Municipal Employment Services play an active role in overall planning, in providing information to workers in recruitment and in supervising training activities.

C. Training programme for low-income female workers

Training activities under this programme cater for unemployed or underemployed females over 17 years old and with a low level of educational attainment. This is a joint programme financed by the National Women's Service (Servicio Nacional de la Mujer) - a top level autonomous public institution - and administered by SENCE according to its standard procedures. Training lasting an average 250 hours is imparted by private training agencies selected by competitive bidding. Since the beginning of the programme in 1992, almost 400 women have been trained in home economics, semi-skilled industrial occupations (including some typically male occupations) and handicrafts, at a total cost of US$ 250,000.

D. Youth training programme

The target population of this programme is 100,000 socially disadvantaged young labour force entrants (orphans, those with a low-income family background, young single mothers, etc.) and unemployed or underemployed workers 15 to 24 years old with no formal technical or vocational education. It is a four-year, nationwide, 70 million dollar project financed, planned and administered by SENCE, with financial support from the Inter-American Development Bank.

The project has five components:

(i) pre-employment training (150 to 250-hour courses) followed by a four-month practice period on-the-job, financed under an employment subsidy scheme. The training component cost averages US$ 2.5 per trainee-hour and US$ 7,800 per course;

(ii) a six-month alternate (work/training centre) apprenticeship, in subsidized private firms;

(iii) basic assistance for self-employment (250-hour courses);

(iv) teaching equipment;

(v) institutional development projects aimed at strengthening the managerial and technical capacity of SENCE, the network of Municipal Employment Services and middle level technical schools acting as training agencies.

Training grants include free training, meal and transportation allowances during the training period, life and labour hazards insurance for trainees, and wage subsidies for firms employing apprentices and in-practice trainees. More than 2,000 training projects for 41,000 participants have been financed by SENCE since the beginning of the Youth Training Programme in 1991, with a total cost of US$ 24 million.

E. Apprenticeship programme

Apprenticeship is a legally regulated work contract of a special kind, under which young workers - up to 21 years old - acquire practical skills by following a structured work programme within a firm under a master's guidance. During the apprenticeship period

(maximum 12 months) apprentice wages are subsidized by up to 60 percent of the legal minimum monthly wages of US$ 100. The number of apprentices a firm may hire at any one time must not exceed 10 percent of its permanent staff. Under Chilean apprenticeship laws, no provision is made for school-based related education. To qualify for subsidies, apprenticeship contracts have to be approved by SENCE. Apprenticeship contracts and subsidies are regulated by the Labour Code and the Training and Employment Statute (DFL No.1/1989), respectively.

The apprenticeship scheme is still a small scale training programme in Chile. In 1992, fewer than 700 apprentices were trained in 69 firms and their total wages subsidy amounted to US$162,000. Starting in 1993, a pilot experiment with the German dual apprenticeship system was due to be launched.

F. Achieving local labour market relevance

Public training programmes are provided by private training agencies. They are invited to submit training proposals with high employment potential. These projects (programmes) are selected by SENCE, in line with its established criteria, on the basis of competitive bidding, a procedure which favours decentralized project-design based on a thorough knowledge of local labour markets.

As an illustration of this process, training programmes under the Youth Training Programme scheme - as with other public training programmes - are planned and executed locally, mostly by local training agencies such as technical schools, universities and vocational training institutions. In the bidding process, each agency has to submit a training proposal which includes "statements of commitment" signed by local employers willing to accept trained youngsters for work practice. These proposals are evaluated by SENCE according to various criteria which include the references of the training agency; the technical quality of the training courses offered; employment prospects for the trainees; and the costs of training. Whilst theoretically sound, the main weaknesses of this project evaluation process are the subjectivity of evaluators and the limited verification of the references and information provided by the training agencies. Subsequently, SENCE supervises training course implementation and the trainees practice periods in firms.

Until recently there had been very few follow-up studies concerning public training programmes. In 1993, however, two major studies were launched under SENCE's funding, one referring to the Youth Training Programme and the other to retraining programmes for displaced coal miners. The results of these studies are not yet available.

V. Evaluating training system performance

A. Size and effectiveness of the vocational training system

Under the Training and Employment Statute enacted in 1976 training activities have increased remarkably - especially in the field of private training - both in terms of number of workers trained and public expenditure, as shown in Table 4.

Table 4. Number of workers trained and public expenditure on vocational training

Years	Firms training programmes		Public training programmes	
	Trainees thousands	Tax rebates US$ million	Trainees thousands	Expenditure US$ million
1977	22.6	2.03	32.5	3.13
1978	59.5	5.68	48.9	4.92
1979	68.8	9.58	51.9	6.97
1980	97.2	12.73	51.9	6.61
1981	93.2	16.43	21.1	5.07
1982	88.2	12.94	20.9	3.74
1983	105.5	14.32	19.6	1.89
1984	122.9	16.05	21.7	1.84
1985	136.8	14.57	22.0	1.50
1986	138.1	12.39	14.8	1.33
1987	162.8	15.42	13.6	1.31
1988	174.7	16.88	9.8	0.99
1989	186.9	18.88	11.5	1.12
1990	199.6	21.41	5.3	0.52
1991	232.7	26.01	28.2	12.06
1992(*)	259.8	31.04	24.2	14.09

(*) Provisional figures

Source: SENCE. Statistical Bulletin No.4. 1993

Currently, public expenditure on training is more than three times INACAP's budget in 1976[2], and its growth rate exceeds that of GNP and employment. Private expenditure on firm-based training activities accounted for a further US$ 14 million in 1992 (43 percent of public expenditure on firm-based training).

The system has proved to be highly responsive to labour market signals, since:

(i) private training services are provided as a response to firms' actual requirements. The most dynamic economic sectors in terms of productivity growth and technological progress, such as manufacturing, financial services, mining and transport and communications, have made the greatest use of fiscal incentives for vocational training;

(ii) public training programmes, focusing mainly on young people entering the labour market, are highly decentralized and often include employment-inducing provisions for graduates, such as apprenticeship contracts and subsidized practice in private enterprises.

Nevertheless, it should be borne in mind that firm-based training is geared to internal market needs - in terms of upgrading and updating specific competencies of in-service workers - so its contribution to labour mobility and labour market flexibility is questionable.

It is also necessary to keep a sense of proportion. In spite of its remarkable growth, less than three percent of tax paying enterprises participate in the system, and only one third of the fiscal incentive potential - currently estimated in US$ 97 million - is being used.

B. The equity issue

The vocational training fiscal incentive is clearly benefitting bigger firms - 84 percent of total subsidies were claimed by larger enterprises (200 or more employees) in the period 1985 to 1988. Thus the system is probably generating "windfall gains" to these larger firms at public expense, since they do not need tax rebates in order to spend on training. For instance, many former public enterprises in the energy, transport and communications sector continued pre-existing training programmes after privatization, but now benefit from the tax rebate scheme.

Similar evidence was produced during a case study sponsored by SENCE in 1981, which showed that the training budget in a group of eighteen large private firms remained a 0.6 percent of payroll expenditure, even after the fiscal incentive was enacted (SENCE, 81). Furthermore, some important restrictions introduced into the tax rebate scheme in 1980, 1985 and 1987, establishing a ceiling on deductible training costs, have not had any noticeable dissuasive impact in private training activities in larger enterprises. Bigger firms are less susceptible to and less affected by financial restrictions or human capital drainage risks (i.e., risk of promoting external mobility of workers or increasing the cost of retraining them) when they invest in training, therefore there are no clear social reasons - in terms of equity or economic efficiency - for subsidizing their training expenditures.

As for the smaller firms, many reasons have been given for their weak response to the training incentive. These include:

(a) ignorance about the tax rebate scheme and its procedures;

(b) fear of fiscal tax audits and bureaucratic controls;

(c) financial cost of recouping deferred training expenditures, since the tax rebate operates in the following fiscal year;

(d) irrelevance of the fiscal incentive, since the maximum deductible amount - one percent of payroll or US$ 300 - is insufficient for their training needs. Furthermore, small firms do not enjoy economies of scale regarding the fixed administrative costs of training activities;

(e) risk of losing trained workers or higher cost of retraining them;

(f) less need for training as compared to larger firms, due to the low level of technology they employ. A recent survey concluded that less than three percent of small firms trained their workers regularly, and one third of the rest felt no need for training programmes (SERCOTEC, 91); and,

(g) services supplied by training agencies do not meet the needs of small firms. Training contents are either too theoretical or designed according to the requirements of larger enterprises. On the other hand, training agencies claim that small firms are not a profitable market since their training needs are too heterogeneous and dispersed.

Another facet of the equity issue is that a significant amount of the training subsidy is being used to train high level personnel. Thus, in the period 1981 to 1988 more than 25 percent of the subsidy was allocated to training programmes for professionals and managers

(Martinez, 91). In 1992 over 17 percent of the subsidy benefited employees earning more than US$ 12,000 annually (SENCE, 93). (In this connection, it is interesting to note that less than ten percent of wage earners in Chile belong to this income bracket).

As a result of a legal reform introduced in 1988 (Decreto con Fuerza de Ley 18709) - to target training incentives on low income workers - firms are allowed to deduct only 50 percent of the cost of training high level personnel. This reform produced the expected result and, at the same time, showed that some firms are able to invest in training without incentives. During the period 1988 to 1992 non tax-deductible expenditures on training high level personnel amounted to US$ 45 million. If it were not for the 50 percent ceiling, these firms would have saved an extra US$ 25 million at fiscal expense, as shown in Table 5.

Table 5. Training expenditures on high level personnel. 1988-92

	US$ (millions)
Tax-deductible expenditures	24.7
Non tax-deductible expenditures	44.9
Total expenditures	69.6*

* Includes 50 percent training cost borne by the firms (US$ 24.7 million) and other non deductible training expenditures (US$ 20.2 million).

Source: SENCE

C. The efficiency issue

It had been expected that training costs would decrease as a consequence of the growing experience and efficiency of training agencies. In fact, training costs per trainee-hour have increased, in real terms, as compared to former INACAP's costs. They have risen from US$ 1.46 in 1976 (INACAP, 76) to US$ 4.44 in 1992 in firm-based training programmes (of which US$ 3.10 is subsidized). As for public training programmes, costs per training hour have increased from US$ 17.49 in INACAP in 1976 to an estimated US$ 48.89 in SENCE's Youth Training Programme in 1992 (SENCE, 93)[3].

Furthermore, unit training costs exhibit a high dispersion among different training specialities. 1990 data show that the average cost per trainee-hour for foreign language courses was ten times higher than for die makers courses (Martinez, 92), a seemingly surprising finding that is explained by two factors:

(a) English courses are demanded mostly by high level executives and professionals, who appear to be not very cost conscious (especially when this cost is subsidized by the tax rebate scheme).

(b) Language teachers (generally foreigners with university degrees) are more expensive than die-making instructors (Chileans with a middle level technical education degree).

In the same year, a large enterprise reported costs per trainee-hour ranging from US$ 0.57 to US$ 63.37. This results from the fact that the training supply market is highly fragmented and lacks economies of scale. There are more than 1,700 training agencies operating in a US$ 57 million market. Moreover, this is not a truly competitive market. Distortions arise from the non-efficient behaviour of many firms that buy training services. Sub-optimal choices are made as a result of a scarcity of information on what is available, easy subsidies and the heterogeneity of training services offered in terms of content and quality. This context clearly favours high economic returns for training agencies with aggressive marketing strategies or which enjoy monopolistic advantages.

D. Training demand in firms

The training demand which firms make on training agencies is heavily biased towards short courses (average 34.3 hours per course) primarily in the areas of computer operation, languages, management, marketing and social skills. These are transferable skills which contribute to broadening the workers functional

flexibility ("despecialization"). Thus, in 1990 almost half of the subsidized training expenditure related to these specialities and less than ten percent to training in specific production techniques. Ad hoc technical training tends to be provided on-the-job or internally at the firms' expense. It is difficult to know how much of this demand structure responds to real training needs and priorities and how much is the consequence of a shortage of external technical training supply, since training agencies are less inclined to invest in the equipment, training technology and teachers' training needed to design and deliver such courses[4]. Furthermore firms' training activities generally respond to a traditional reactive pattern, i.e., training is performed to meet current perceived needs.

E. Public vocational training

The public vocational training provision includes:

(i) training or retraining grants for unemployed or underemployed adult workers;

(ii) training grants for young labour force entrants, and

(iii) subsidized apprenticeship programmes in enterprises.

These programmes are conceived not only as a means of alleviating poverty but also of forming new skilled and semi-skilled workers to meet employment growth and replacement needs. During much of the 1980's the volume of public vocational training contracted significantly in terms both of the number of trained workers and the level of public expenditure (Table 2). Nevertheless this contraction did not affect economic activities since there was a surplus of trained workers in the employment market, most of them trained by INACAP prior to 1980. Currently, Chile is approaching full employment (4.5 percent unemployment rate in March 1993) and the symptoms of a skilled worker shortage are beginning to appear, especially in the construction and manufacturing sectors. These circumstances and the fact that almost 140 thousand school leavers or dropouts join the labour force each year without any vocational training (Martinez, 92) prompted SENCE to develop (in 1991) a large scale Youth Training Programme aiming to impart initial training to 100,000 youngsters in a four year period.

Unit training costs are lower in public programmes as compared to firm-based programmes. The average cost per trainee-hour is US$ 2.49 in the Youth Training Programme and US$ 2.43 in adult training programmes, in contrast to US$ 4.44 in firm-based programmes (SENCE, 93). These differences cannot be explained only in terms of course content and quality: the fact that public authorities tend to pay particular attention to cost factors when evaluating training proposals is also significant.

Formal apprenticeship in Chile is essentially an employment promotion device, since: (i) no provision is made for the complementary education of apprentices, and (ii) on-the-job training activities are loosely supervised. However, growth in the apprenticeship programme since its beginning in 1988 has been meagre, as shown in Table 6.

Table 6. The apprenticeship programme

Years	Apprentices	Firms	Subsidies US$ thousand
1988	518	94	117.7
1989	447	54	107.7
1990	441	61	82.9
1991	918	99	248.4
1992	655	69	154.4

Source: SENCE

This outcome is rather paradoxical in a situation of full employment, but firms' reluctance to hire apprentices can be explained by:

(i) ignorance of apprenticeship subsidies and procedures;

(ii) fear of bureaucratic controls;

(iii) practical restrictions on the length of apprenticeship contracts (less than 12 months); and,

(iv) the ineffectiveness of subsidies in small firms, since their tax rebate ceiling is only one percent of payroll or US$ 300, whichever is higher. The main underlying cause, however, seems to be the lack of an apprenticeship culture in Chile.

F. The training quality issue

SENCE lacks sufficient legal and technical capacity to control the quality of services provided by training agencies. Many firms are also not very demanding in this respect, due partly to a lack of experience in evaluating training outcomes or to the fact that their training expenditures are heavily subsidized. As a result, the quality of training services is quite uneven: prestigious universities for instance, compete with more or less informal training agencies. Analysis of this issue suggests that competence and market incentives appear insufficient to induce training agencies to invest in quality enhancing factors such as teacher training and upgrading, teaching equipment and materials, curriculum design and training needs assessment capability, and research and development in educational technology.

G. The role of intermediary organizations

The institutional framework of Chile's vocational training system includes the privately managed - sectorial or regional - Intermediary Technical Organizations (Organismos Técnicos Intermedios - OTIR). OTIR are responsible for planning and organizing training activities for small firms, on a cooperative basis. The rationale of the system is based on economies of scale and the pooling of tax-deductible financial contributions of numerous small and medium size firms. In spite of its theoretical validity, the OTIR system has grown only slowly (in 1991 they channelled less than 14 percent of training incentives) and has failed to respond to expectations. This rather poor performance can be attributed to lack of working capital in the majority of the OTIR, legal difficulties in starting operations and the fact that the cooperative principle has been neglected since contributing firms are served only within the limits of their individual contribution.

H. Workers' participation in vocational training policies and programmes

In Chile there is no legal provision for workers' participation - individually or collectively -in decisions concerning training, either at the firm or at higher levels. On the other hand, nothing impedes negotiating this kind of participation in collective contracts, but this is seldom done. Workers' participation is a sensitive and complex matter in the current labour relations climate, since labour unions claim that firm-based training programmes reflect only the employers' interests and that workers have a right to participate in decisions concerning the use of public funds transferred to firms - through tax rebates - for training purposes. As for the firms, they claim that training decisions are a private concern, based strictly on technical and financial considerations, aimed at enhancing productivity and the sustainable growth of the organization. These assertions suggest that in some firms labour relations are still built basically on the assumption of conflicting interests.

From a national perspective, workers participation in in-firm training decisions can contribute to:

(i) greater effectiveness of training programmes (better planning and evaluation);

(ii) labour force mobility (an outcome that is feared by individual firms if training promotes external mobility);

(iii) equitable access to training opportunities; and,

(iv) workers commitment to and identification with the organization's objectives.

On the other hand, legally enforced participation within a non compulsory training system would risk:

(i) the ideologization of an essentially technical subject, thus introducing a new source of conflict in labour relations; and,

(ii) discouraging training efforts in firms fearing the external mobility of trained workers or the growth of labour union power.

VI. Conclusions

There is no doubt that training reforms in Chile (notably the Vocational Training and Employment Statute) have had a major impact, at least quantitatively. The system of subsidies has impacted on both demand and supply. As regards demand, the number of trainees and the resources allocated to training have more than trebled since 1976 by comparison with the level of activity and expenditure in the former public vocational training system. In 1992 more than 260,000 workers (at all levels) received training supported by the tax rebate scheme and a further 24 thousand persons participated in public training programmes. On the supply side, the reforms have given an impetus to the development of a very active training market in which a large number of private training providers compete for public funds or private training investment.

Unfortunately the reforms have so far had only a limited distributional (equity) impact, with the greater part of state-subsidized training taking place in larger firms (which would probably have trained their staff without state incentives) and for top-level personnel. There are also doubts about the quality of some of the subsidized training. This arises, firstly, from the weight given to costs rather than to cost-effectiveness in evaluating competitive bids and, secondly, from limitations in the institutional capability of the National Training and Employment Service (SENCE) to evaluate proposals from training providers and to monitor outcomes (in terms of skill gains or increased employability).

Despite these limitations, there is evidence that decentralization of demand decisions to the level of individual firms, 'intermediary organizations', and local offices of SENCE has brought training supply much nearer to local labour market demand. It has also enhanced the capability of the system to respond flexibly to local needs and has stimulated the growth of local training providers attuned to local conditions. The system is essentially market-driven, with all the strengths and weaknesses that implies. Clearly the structures are in place for a flexible, responsive and cost-effective training system to flourish, though as yet efficiency (in terms of unit cost reduction) and local relevance have not yet been fully achieved.

On the debit side, decentralization has made it difficult to give effect to various national policies and standards such as those dealing with the school year calendar; teachers' salaries and career paths; mobility of students between different types of school; and the treatment of students with special problems (e.g., pregnant girls). Proper attention to extra-curricular activities of national importance (for example, anti-drug campaigns, environmental education, AIDS prevention etc.) is also difficult to ensure under a decentralized system.

Decentralization - ironically perhaps - has also tended to increase regional disparities particularly in education. It has contributed to a social segmentation of educational opportunities in that richer communities have access to better education and training than poorer communities. This disparity manifests itself, predictably, in retention rates (higher dropout rates in poorer communities), learning gains and academic achievement. It is not clear whether similar disparities are evident in skills training, though one can reasonably assume that a knock-on effect from a lower educational base coupled with a more limited training provision would characterize economically disadvantaged districts and communities.

Notes

[1] 194 middle level (secondary) technical schools remained privately managed.

[2] Up to 1976 INACAP was the official Vocational Training Institution, financed by public budget contributions, providing semi-skilled and skilled training services free of charge.

[3] Based on a total expenditure of US$ 13.37 million for 1,094 training courses of an average duration of 250 hours.

[4] Note that in Chile there are no subsidies for investments by training agencies.

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